Amendments to the Specification:

Please replace page 2, in its entirety, with the following pages 2 and 2a:

the sole source of carbon and nitrogen. The reaction proceeds via two initial

intermediates, hydroxylaminobenzene and *ortho*-aminophenol. The enzymes involved

in catalyzing the initial steps are a nitroreductase and a hydroxylaminobenzene

mutase. On first inspection the reaction seems similar to the nonenzymatic

Bamberger rearrangement. The mechanism of the reactions and the stereochemistry

of the products are distinctively different, however. The nitroreductase from strain

JS45 has been purified and characterized as a flavoprotein requiring NADPH as an

electron donor. Two genes expressing hydroxylaminobenzene (HAB) mutase activity,

HabA (SEQ ID NO 1) and HabB (SEQ ID NO 2), have been cloned from strain JS45

and expressed in *E. coli* (J. K. Davis et al, Appl. Environ. Microbiol., Vol. 66, No. 7,

2965-2971, 2000), and one mutase enzyme, HabB (Z. He et al, Eur. J. Biochem., Vol.

267, 1110-1116, 2000), has been partially purified. JS45 was deposited in the

American Type Culture Collection Patent Deposit in January, 2002, Patent Deposit

Designation PTA-3972. Other reports have demonstrated that bacteria, such as

Clostridium acetobutylicum, *Ralstonia eutrophus* JMP134, *Pseudomonas putida*,

Pseudomonas putida HS12, strain LW1 of the *Comamonadaceae* family, and

Pseudomonas putida 2NP8, synthesize nitroreductases and hydroxylaminoarene

mutases that transform a wide range of nitroaromatic compounds to the

corresponding aminophenols. The metabolic degradation processes in the above

strains are comparable to that described for *P. pseudoalcaligenes* strain JS45. It

should be noted that these studies have been directed to biodegradation, i.e, the

breakdown of organic compounds into more cell biomass and less complex

compounds, and ultimately to water, and either carbon dioxide or methane. The

above-described intermediates have been proposed or noted as intermediates in the

biodegradation process(es), and have not been seen as end-products per se.

After page 14 and before the listing of claims, insert the following pages: